

L 40182-66

SNT(m)/T/RDP(t)/STI

IJP(c)

JD/JG

ACC NR: AP6029384

SOURCE CODE: UR/0126/66/021/004/0519/0523

AUTHOR: Val'chikovskaya, V. A.; Kushta, G. P.; Rybaylo, O. I.

ORG: Chernovitsy State University (Chernovitskiy gosuniversitet)

TITLE: Temperature dependence of the lattice parameter and intensity of regular x-ray reflections for Au-Ag alloys [This paper was presented at Section of Lattice Dynamics of the 8th All-Union Conference on Roentgenography held in Leningrad in November 1964.]

SOURCE: Fizika metallov i metallocovedeniye, v. 21, no. 4, 1966, 519-523

TOPIC TAGS: temperature dependence, lattice parameter, x ray study, silver alloy, gold alloy, alloy composition, radiography

ABSTRACT: The article presents the results of an investigation of the temperature and concentration dependence of lattice parameter and characteristic temperature for Au-Ag alloys containing 10, 25, 40, 60, 70 and 90% Ag, along with calculations of the universal lattice anharmonicity

parameter $\gamma\beta \approx \frac{d \ln \theta}{dT}$ (γ is the Grueneisen constant, β is the coefficient of volume expansion). Composition-property diagrams are constructed for Au-Ag alloys with "p" property pertaining to the values of $\theta_{x\text{-ray}}$ and $\gamma\beta$. It is shown that these diagrams are in qualitative correspondence with the present-day concepts of the statistical theory of

UDC: 539.26:669.225

0917

2628

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L 602-2-36

ACC NR: AP6029384

alloys. A correlation is established between the quantities $n \gamma \beta$ and mixing energies of the alloys; this is a major finding considering that the mixing energy determines the type of the constitution diagram of the alloy. Selection of the Au-Ag system as the object of investigation was primarily dictated by the lack of corresponding data on these alloys in the published literature. Moreover, alloys of this system lack such side-effects as static distortion, oxidizability, and ordering which, if present, complicate the radiographic experiment and interpretation of the findings.

Orig. art. has: 6 figures. [JPRS: 36,774]

Orig. art. has: 6 figures. [JPRS: 36,774] SUB CODE: 20, 14, 11 / SUBM DATE: 23Mar65 / ORIG REF: 008 / OTH REF: 006

KOLAROVA, J.; ZDARIL, J.; VALCHOVA, M.; VILIM, V.

Botulism. Cesk.pediat.16 no.1:11-15 Ja '61.

1. Infekoni oddeleni KUNZ v Plzni, prednosta prim. dr. J.Zdaril
Krajska hygienicka stanice v Plzni, prednosta dr. V.Stastny.
(BOTULISM in inf & child)

KOLAROVA, J.; SOSNA, V.; VALCHOVA, M.; BERANOVA, I.

Suppurative Listeria meningitis in children. Cesk. pediat. 17 no.10:
922-924 0 '62.

1. Klinika nemoci infekcnich statni fakultni nemocnice v Plzni,
prednosta doc. dr. V. Palisa, CSc.
(LISTERIA INFECTIONS) (MENINGITIS)
(POULTRY DISEASES)

PALISA, V.; VALCHOVA, M.; FENCL, V.; ZDARIL, J.

An atypical case of botulism. Bratislav. lek. listy 1 no.12:
711-714 '64

1. Klinika nemoci infekcni KU [Karlov university] v Plzni
(vedouci doc. MUDr. V.Palisa, C.Sc.) a Krajska hygienicko-
epidemiologicka stanice zapadoceskeho kraje (zastupujici
vedouci MUDr. V.Tomecek).

ZDARIL, Jaroslav; KUBICKOVA, Olga; WAGNER, Vladimir; JEDLICKOVA, Zdenka;
MALY, Vladimir; VALCHOVA, Marie

The course of dysentery under the influence of different
methods of treatment. Vnitri lek. 11 no.1:59-67 Ja '65

1. Infekci oddeleni Krajskeho ustavu narodniho zdravi, Plzen
(prednosta - dr. J. Zdaril); Mikrobiologicky ustanov v Plzni
(prednosta - docent dr. Vladimir Wagner); Ustanov organizace
zdravotnictvi v Praze (prednosta - prof. dr. J. Prosek) a
Mikrobiologické oddeleni, Krajska hygicko-epidemiologicka
stanice, v Plzni (prednosta - dr. M. Valchova).

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5

BULANOV, A.; VAL'CHUK, A.

In Kiev after the liberation. Voen. znan. 40 no.12:14-15 D'62
(MIRA 18:1)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5"

VAL'CHUK, G.I., inzhener; KOROGODSKIY, M.V., inzhener

Experiment in restoring thin-walled cast iron machine parts.

Svar. proizv. no. 2:26-27 F '55. (MIRA 8:9)

(Cast iron--Welding)

VAL'CHUK, G. I.

Increasing the wear resistance of steel-bushed roller chains.
Sel'khozmashina no.10:26-27 0'55. (MLRA 8:12)
(Chains)

SAKHnenko, Vladimir L'vovich; MAKSIMOVICH, Vadim Aleksandrovich; TROITSKIY,
Anatoliy Vasil'yevich; TROCHUN, Ivan Petrovich; POTISHKO, Aleksey
Vasil'yevich; AVRAMENKO, Luka Avksent'yevich; VAREYKIS, Arnol'd
Mikhaylovich; VITKUP, Ye.B., redaktor; RAYKO, M.V., redaktor; SAMO-
KHVALOV, Ya.A., vedushchiy redaktor; VAL'CHUK, G.I., vedushchiy
redaktor; PATSALYUK, P.M., tekhnicheskiy redaktor

[Atlas of machine parts; mechanical joints and couplings] Atlas
detalei mashin; soedineniya i mufty. Kiev, Gos. izd-vo tekhn. lit-
ry USSR, 1956. 146 p. (MIRA 10:2)
(Couplings) (Welding) (Fastenings)

VAL'CHUK, G. I.

DRAYGOR, D.A.; VAL'CHUK, G.I.

Seizing of metals resulting from friction and the wear resistance
of steel subjected to repeated variable loads. Sbor.trud.Inst.stroi.
mekh.AN URSR no.22:93-99 '56. (MLRA 10:5)
(Steel--Testing) (Mechanical wear)

VAL'CHUK, G.I.

BARABASH, M.L.; VAL'CHUK, G.I.; NATANSON, E.M.

Effect of metal colloidal lubricants on the wear and friction coefficient of some materials. Sbor. trud. Inst. stroi. AN URSR no.22: 100-109 '56. (MLRA 10:5)

(Mechanical wear) (Lubrication and Lubricants)
(Friction)

SOV/123-59-11-5051

Translation from: Referativnyy zhurnal.. Mashinostroyeniye, 1959, Nr 12, p 25 (USSR)

AUTHORS: Grozin, B.D., Val'chuk, G.I., Gorb, M.L.

TITLE: The Physical State of the Surface Layers of Machine Parts¹⁴

PERIODICAL: V sb.: Issled. po fiz. tverdogo tela. Moscow, AS USSR, 1957, pp 32-40

ABSTRACT: The Institute of Construction Mechanics of the AS UkrSSR carried out investigations on the complex application of research methods with the aid of electron microscopes, analysis of metal structure, X-rays and spectrum analysis in studying the mechanism of origination and destruction of the surface layer. Besides, different methods of the hardening technique have been worked out, which are applicable to the operating conditions of the machine parts. The investigations proved that the outer (active) metal layers are formed under the effect of all technological processes, both thermal and mechanical. The presence of structural stress concentrators is an important factor, lowering the durability of machine parts. Plastic deformation and heating of the outer metal layers as a result of friction, cause changes in the mechanical properties of various steel grades up to

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The Physical State of the Surface Layers of Machine Parts

SOV/123-59-12-46051

different degrees and in different directions, depending on the composition of the steel grade, processing conditions and the heating temperature of the machine part during the operation process. Diagrams of the test results are given for metals of various grades. 9 figures.

P.V.M.

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VAL'CHUK G. I.
25(1) p. 4 PHASE I BOOK EXPLOITATION SOV/1813
Akademiya nauk Ukr SSR, Kiyev. Institut stroitel'noy mekhaniki
Issledovaniya v oblasti metallovedeniya i kontaktnoy prochnosti metallov; stornik dokladov (Investigations in the Field of Physical Metallurgy and Contact Strength of Metals; Collection of Reports) Kiyev, Mashgiz, 1958. 127 p. 4,000 copies printed.
Additional Sponsoring Agency: Nauchno-tehnicheskoy obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye.
Reviewers: V.G. Chudnovskiy, Doctor of Technical Sciences; D.V. Vaynberg, Doctor of Technical Sciences; M. Barabash, D.A. Draygor, I.I. Ishchenko, L.P. Reva, V. Ye. Salion, and V.A. Shévchuk, all Candidates of Technical Sciences;
Ed.: B.D. Grozin, Doctor of Technical Sciences, Corresponding Member, USSR Academy of Sciences, Professor; Ed. of Publishing House: M.S. Soroka;
Tech. Ed.: Ya. V. Rudenskiy; Chief Ed. (Ukrainian Division, Mashgiz);
V.K. Serdyuk, Engineer.

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Investigations in the Field (Cont.)

SOV/1813

PURPOSE: This collection of articles is intended for engineers and technicians in machine plants and in scientific research institutes.

COVERAGE: The book consists of ten papers presented at a seminar held under the auspices of the Academy of Sciences UkrSSR, and the Kiyevskaya oblast' NTO Mashprom (Scientific and Technical Division of the Machine Industry). This seminar examined the results of research in the field of friction and wear of machines and means of increasing the wear resistance of machines, as well as of work done in various scientific establishments, institutes, and plant laboratories. The problem of friction and wear of machines covers a very wide field of scientific investigation including studies of the mechanics of friction and wear, determination of the mechanical and physical properties of surface layers of machine parts, development of testing machines and procedures, and the technology of increasing the wear resistance and service life of machines and mechanisms. In the first article, Grozin and Val'chuk present the results of their experiments dealing with the change of properties of the surface layers of crankshaft journals caused by machining and with the causes of crack formation. The second paper deals with methods of calculation of the permissible wear and service life of machine parts. The third article attempts to demonstrate the

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Investigations in the Field (Cont.)

SOV/1813

effect of friction on metal fatigue, depending on the nature of the friction surfaces. Three papers by M.A. Puzanov discuss the wear resistance of certain steels in relation to the nature of contact, wear of heavy duty components of crane hoists subjected to cyclic loads, and a machine used for testing the wear resistance of cylindrical test samples subjected to sliding friction. Two papers by V.N. Semirog-Orlik deal with the application of the Grozin method of testing steel samples and with the determination of machinability of cast iron according to the factor of octahedral tangential stress. A.I. Kuyun describes the design and the use of a miniaturized thermocouple used to study thermal phenomena in the surface layers of metals. The article by M.L. Gorb deals with the method of processing experimental data and results of studies of test samples subjected to omnidirectional and nonuniform compression. The text contains numerous diagrams, charts, and illustrations.

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on Crankshaft Journals Hardened by High Frequency Currents

Pronikov, A.S. Design of Machine Parts for Service Life With Respect
to Wear

Semirog-Orlik, V.N. The Size Factor in Omnidirectional Uneven
Compression

Draygor, D.A. The Effect of Friction Conditions on the Fatigue
of Steel

Puzanov, M.A. The Study of Wear of the Surface Layer of Rollers
Made of Grade 45 and U8 Steel

Puzanov, M.A. Study of the Causes of Accelerated Wear of Wheels
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Semirog-Orlik, V.N. New Criteria for Estimating the Machinability
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Investigations in the Field (Cont.)

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Gorb, M.L. Resistance to Plastic Deformation of High Strength Steel
Under Conditions of Omnidirectional Uneven Compression in the
Temperature Range of 20°-400°

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Puzanov, M.A. Machine for Wear Resistance Tests

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AVAILABLE: Library of Congress

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Structural Stress Concentration and Ways to Extend the Service Life of Tractor-Loader Crankshafts

Povysheniye iznosostoykosti i sroka sluzhby mashin. t. 2 (Increasing the Wear Resistance and Extending the Service Life of Machines. v. 2) Kiyev, Izd-vo NII UkrSSR, 1960. 290 p. 3,000 copies printed. Series: Its: Trudy, t. 2)

Sponsoring Agency: Vsesoyuznoye nauchno-tehnicheskoye obshchestvo mashinostroyitel'noy promyshlennosti. Tsentral'nyy i Kiyevskoye oblastnoye pravleniya. Institut mekhaniki AN UkrSSR.

Editorial Board: Resp. Ed.: B. S. Grozin; Deputy Resp. ED.; D. A. Braygor; N. P. Braun, I. D. Faynman, T. V. Kragel'skiy; Scientific Secretary: N. L. Barabash; Ed. of v.2: Ya. A. Samokhalov; Tech. Ed.: N. P. Rakhлина.

COVERNOTE: The collection contains papers presented at the Third Scientific Technical Conference held in Kiyev in September 1957 on problems of increasing the wear resistance and extending the service life of machines. The conference was sponsored by the Institut stroitel'noy mekhaniki AN UkrSSR (Institute of Structural Mechanics of the Academy of Sciences Ukrainian SSR), and by the Kiyevskaya oblastnaya organizatsiya nauchno-tehnicheskogo obshchestva mashinostroyitel'noy promyshlennosti (Kiyev Regional Organization of the Scientific Technical Society of the Machine-Building Industry).

GROZIN, Boris Dmitriyevich; DRAYGOR, David Abramovich, doktor tekhn.nauk;
SEMIROG-OHLIK, Vsevolod Nikolayevich, kand.tekhn.nauk; PUZANOV,
Mikhail Apollonovich, kand.tekhn.nauk; GORB, Matvey L'vovich,
kand.tekhn.nauk; YANKEVICH, Vil'yam Fedoseyevich, inzh.;
SINYAVSKAYA, Mariya Dmitriyevna, inzh.; VAL'CHUK, Georgiy Iosifovich, inzh.;
KRAMAROV, V.S., prof., doktor tekhn.nauk, retsenzent;
TINYANYY, G.D., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn.red.

[Increasing operating safety of machine parts] Povyshenie eksplu-
atsionnoi nadezhnosti detalei mashin. Moskva, Gos.nauchno-tekhn.
izd-vo mashinostroit.lit-ry, 1960. 292 p.

(MIRA 14:1)

1. Chlen-korrespondent AN USSR (for Grozin).
(Machinery) (Mechanical wear--Testing)

10.7400
18.8200

26758
S/021/60/000/011/006/009
D204/D302

G 1.

AUTHOR: Val'chuk, H. I.

TITLE: Effect of contact crumbling on the steel fatigue strength

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 11,
1960, 1496 - 1500

TEXT: This is a continuation of previous investigations. The mechanism of sliding friction effect on the steel fatigue strength is a result of two factors: a) The strengthening of its surface area by forming residual pressure-stresses which affect favorably the fatigue strength; b) The formation of contact crumbling focuses which leads to fatigue strength decrease; the value of both factors depending on the sliding friction conditions. It has been found that crumbling of the surface area occurs after a great amount of contact pressure, the formation of crumbling focuses being taken as disintegration indicator. During the first stage of slid-

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Effect of contact crumbling ...

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ing friction the surface unevenness is smoothed down and a continuous contact area is formed; during the second stage deep contact crumbling focuses are formed. Special investigations were carried out on the effect of cyclic flexing on the steel fatigue strength. Samples of a standard steel 40KH, Ø 18 mm, hardness $H_{Bb} = 93 - 98$ have been tested under flexing pressure $\sigma_B = 75 \text{ kg/mm}^2$. The sliding-contact friction was carried out by means of a 3 rolls device, the rolls made of steel ShKh15, tempered to the hardness $H_{RC} = 60 - 62$; the fatigue tests - by cyclic flexing with 200 rev/min [Abstractor's note: No further details of testing methods are given]. The effect of friction on the fatigue strength was determined after the formation of crumbling focuses was observed, the rolls sliding in a lubricant, with a constant rolls pressure on the whole contact area equalling 13875 kg/cm^2 , on samples rotating without flexing loads. The amount of crumbling was determined after $2.5 \cdot 10^6$ $5 \cdot 10^6$ and $7 \cdot 10^6$ rolls runs, by means of a binocular microscope

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Effect of contact crumbling ...

MBS-1, the surface of rools contact area and that of crumbling focuses being evaluated. The effect of flexing was determined under flexing pressures of 22.5; 25.3 and 28.1 kg/mm² which were lower than the fatigue strength limit ($\sigma_{-1} = 33$ kg/mm²). It was

found that in the range of runs, cycles from 2.5 to $5 \cdot 10^6$ without flexing the surface of crumbling focuses increased from 4 to 10 mm². The effect of contact crumbling runs on the fatigue strength under flexing pressure higher than that of fatigue limit: $\sigma = 47$ kg/mm² is shown graphically. It is seen that at first with the increase in contact runs the steel fatigue strength increases, reaching a maximum at $3 \cdot 10^6$ runs which is 2.2 times more than the initial fatigue limit. It means that at this stage the prevailing factor is the strengthening of sample surface. A further increase in the runs-cycles leads to a gradual fatigue strength decrease, which at $7 \cdot 10^6$ runs is only $\frac{1}{3}$ of the initial fatigue limit. There are two micro-photographs of a sample after 10^6 contact runs on the first picture, and after a subsequent 190,000 flexings, under a load of 35.86 kg/mm², where the sample was broken on the second; on this

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Effect of contact crumbling ...

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picture it is seen that the sample broke in the crumbling focuses area. The author states that with a relatively low number of contact runs under relatively small contact pressure the sliding friction increases the fatigue strength of low-tempered steel. He tested steel 45, tempered from 830°C and annealed at 200°C ($H_{RC} = 50$) fatigue limit $\sigma_{-1} = 56.4 \text{ kg/mm}^2$, under rolls pressure $\sigma = 4370 \text{ kg/cm}^2$ and 16723 kg/cm^2 ; the number of contact runs being in the range from 200,000 to $3 \cdot 10^6$. He found that under these conditions no marked depth could be observed. These samples under 61.5 kg/mm^2 pressure did show an increase in fatigue limit amounting to 8 % in comparison with that of initial polished only samples. The author states that by a simultaneous action of sliding contact and flexing pressures, the intensity of contact crumbling decreases: a greater number of contact runs cycles is needed for the formation of first crumbling focuses, their surface area being smaller, than in the case of sliding contact pressure only; the crumbling area decreasing with the increase of flexing loads. The specific charac-

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Effect of contact crumbling ...

ters of breaking surfaces with and without crumbling focuses are shown on three micro-photographs; on those depicting breaking surfaces with crumbling focuses a brittle zone in the middle can be observed. There are 4 figures, and 2 Soviet-bloc references.

ASSOCIATION: Institut mekhaniki AN URSR (Institute of Mechanics, AS UkrSSR)

PRESENTED: by F. P. Byelyankin, Member of Academy of Sciences UkrSSR

SUBMITTED: March 17, 1960

Card 5/5

VALCHUK, G.Y.

10.1400

24.4200

S/021/61/000/006/005/009,
D247/D301

AUTHOR: Val'chuk, H.Y.

TITLE: The influence of contact crumpling on the fatigue,
strength of steel taking into account the scale effect

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR, Dopovidi, no. 6,
1961, 727 - 730

TEXT: To investigate the above problem, the author tested specimens of 6.5, 9 and 12 mm diameter in pure bending on machine HY (NU) and specimens of 10, 14, 18, 24, 32 and 40 mm diameter in rotating cantilever tests. The specimens were made from normalized steels 45 and 40X. Contact loading was applied by means of a special three-roller head. The contact stresses reached 170 kg/mm² and the ratios R/d approached 0.6. The contact ring on a specimen and the test rig are shown. The degree of crumpling was measured by the ratio (h/s) of depth to area of crumpling. Tests for limited contact durability were carried out in the absence of any

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bending loads. These tests show that contact durability increases with the increase of specimen diameter. Thus, with the contact stress of 170 kg/mm² the depth $h = 44$ microns and area $S = 1.16 - 1.41$ mm² of crumbling took place after $3 \cdot 10^6$ loading cycles on the 6.5 mm specimen, whereas the 12 mm specimen needed $8 \cdot 10^6$ cycles for the same effect. With the increase of specimen diameter d , the absolute values of depth and area of contact crumbling increase but the relative values, h/d and s/d , decrease. Tests of bending fatigue endurance were carried out at loads of 8 to 10 % above the endurance limit and the effect of contact crumbling was measured by the life coefficient $K = N_1/N$ where N - number of cycles to fail a plain ground specimen, and N_1 - number of cycles to fail the same specimen with a given degree of contact crumbling. The scale effect was defined by $\eta = S = K_d/K_{10}$ where suffix d corresponds to the tested specimen and 10 to the 10 mm specimen with the same degree of contact crumbling. In pure bending tests on ground specimens with a crumbled ring, 7.4 % drop in fatigue limit

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The influence of contact ...

was observed when the specimen diameter increased from 6.5 to 12 mm
In general, the fatigue endurance decreased with increase of speci-
men diameter. However, for small contact pressures, the fatigue
limit increased in specimens of all sizes. There are 2 figures and
1 Soviet-bloc reference.

ASSOCIATION: Instytut mekhaniki AN UkrSSR (Institute of Mechanics,
AS UkrSSR)

SUBMITTED: September 21, 1960

X

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VAL'CHUK, G.I. [Val'chuk, H.I.]

Effect of the size of specimens on the limited strength of
steel in conditions of sliding friction. Dop. AN URSR no.10:1282..
1285 '61. (MIRA 14:11)

1. Institut mehaniki AN USSR. Predstavлено академиком AN
USSR F.P.Belyankinym [Bieliankin, F.P.].
(Strength of materials)
(Steel--Metallurgy)

DRAYGOR, David Abramovich; VAL'CHUK, Georgiy Iosifovich; BELYANKIN,
F.P., akademik, otv. red.; REMENNICK, T.K., red.izd-va;
DAKHNO, Yu.B., tekhn. red.

[Effect of wear on the fatigue strength of steel considering
the scale factor] Vliianie iznosa na ustalostnuiu prochnost' stali s uchetom mashtabnogo faktora. Kiev, Izd-vo
Akad. nauk USSR, 1962. 110 p. (MIRA 16:4)

1. Akademiya nauk Ukr.SSR (for Belyankin).
(Steel--Fatigue) (Mechanical wear)

DRAYGOR, D.A.; VENZHEGA, A.S.; BELKIN, N.Ya.; VAL'CHUK, G.I.; ARUTYUNOV, I.G., kand. tekhn. nauk, retsenzent; SAVEL'YEV, Ye.Ya., red.

[Roll durability in cold rolling finishing] Stoikost' val-kov chistovogo kholodnogo prokata. Moskva, Izd-vo "Mashinostroenie," 1964. 126 p. (MIRA 17:7)

VALICHUK, G. I. [Valeichuk, G. I.] DORF, R. L. [Dorf, R. L.] (Inventors); VITALE, J. M. [Vitale, J. M.]
B.M. [Manufacturers' Agents, Inc.]

Self-hardening plastic as substitute for antifriction metal
compounds in the manufacture of food machinery. Amer. pat.
no. 3,142,451 (11-3-64). (WPA 1819)

I 14417-66 EWP(k)/EWP(z)/EWT(m)/EWP(b)/EWA(d)/EWP(e)/EWP(w)/EWP(t)/^f WH/MJW/JD
ACC NR: AP6002124 SOURCE CODE: UR/0369/65/001/006/0720/0725

AUTHOR: Shul'man, P. A.; Val'chuk, G. I.

ORG: Institute of Superhard Materials and Institute of Mechanics, AN UkrSSR,
Kiev (Institut averkhtverdykh materialov i institut mekhaniki AN UkrSSR)

TITLE: Cyclic strength of 90KhMF steel ground with diamond wheels

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 6, 1965, 720-725

TOPIC TAGS: cyclic strength, steel, grinding, diamond, carborundum

ABSTRACT: Proceeding from the assumption that grinding of hardened steel with ^{44.55/4}
synthetic diamond wheels is associated with a smaller evolution of heat than when
other grinding materials are used, the authors carried out comparative experimen-
tal studies of the surface layers and cyclic strength of hardened low-tempered
90KhMF steel ground with an abrasive of electrolytically produced corundum and
with synthetic diamond wheels.¹ X-ray analysis of the phase composition and
structural state of the surface layers of the samples after grinding was performed
with URS-50I apparatus with iron radiation. The data were in agreement with those
obtained by microhardness measurements. Structural changes caused by diamond
grinding extend over a depth of 40—50 μ as opposed to 90 μ for corundum grinding.

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ACC NR: AP6002124

The mechanical properties of the steel ground with diamond wheels were superior to those of steel ground with carborundum. The low contact strength of the latter is apparently due to the effect of high temperatures and pressures at the tops of surface irregularities, causing the formation of a network of grinding cracks. In diamond grinding, since the structural changes extend to a moderate depth, the heating of the surface layer is much lower. Orig. art. has: 5 figures.

SUB CODE: 11 / SUBM DATE: 20Jun65 / ORIG REF: 010 / OTH REF: 001

Card 2/2 *SO*

VAL'CHUK, N. K.

"The Sanitary Composition of the Soil In the City of Vinnitsa."
Cand Biol Sci, Vinnitsa State Medical Inst, Vinnitsa, 1953. (KL, No 13,
Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institutions (15)

Dissertation: "Sanitary Condition of the Soil of the City of Vinitsya." Cand. Biol Sci,
Acad Med Sci USSR, 14 Apr 54. (Vechernaya Moskva, Moscow, 5 Apr 54)

SO: SUM 243, 19 Oct 1954

VAL'CHUK, N.K.

AID P - 2459

Subject : USSR/Medicine

Card 1/2 Pub. 37 - 6/18

Authors : Bukhovets, V. I., Kand. of Med. Sci., Val'chuk, N. K.,
Kand. of Biol. Sci., Vitte, N. K., Prof., Gabovich, R.D.,
Prof., Topchieva, Ye. P., Kand. of Med. Sci.

Title : Comparative physiological and hygienic evaluation of
the conditions of work on tractors

Periodical : Gig. i san., 6, 26-33, Ja 1955

Abstract : Describes the scientific research work conducted by
different departments of the Vinnitsa Medical Institute
since January 1954, for the study of health conditions
of tractor operators depending on the structural
characteristics of caterpillar and wheel tractors of
different make, on the type of agricultural work and
daily schedule, climate, weather, etc. The investigations
were performed chiefly at the Vinnitsa Machine Tractor
Station Base during the Sowing Campaign of the spring
1954. The effect of noise, of dust content and carbon

Gig. 1 san., 6, 26-33, Je 1955

AID P - 2459

Card 2/2 Pub. 37 - 6/18

monoxide concentration in the air, and of special structural features of tractors on the physiological reactions of operators are analyzed. Recommendations are made. 4 tables.

Institution: Vinnitsa Medical Institute

Submitted : Sept. 18, 1954

BUKHOVETS, V.I.; VAL'CHUK, N.K.; QABOVICH, V.D., professor

Studying morbidity with temporary loss of working capacity at
machine-tractor stations. Sov.zdrav. 15 no.4:18-24 Jl-Ag '56.
(MLRA 9:9)

1. Iz kafedry gigiyeny Winnitskogo meditsinskogo instituta.
(AGRICULTURE,
dis. causing temporary loss of working capacity in tractor
operators (Rus))

VAL'CHUK, N.K., kand.biol.nauk

Noise in machine tractor workshops. Gig. i san. 23 no.6:74 Je '58
(MIRA 11:7)

1. Iz kafedry obshchey gigiyeny Vinnitskogo meditsinskogo instituta.
(NOISE,
evaluation in tractor workshops (Rus))
(INDUSTRY AND OCCUPATIONS,
noise in tractor shops (Rus))

VAL'CHUK, N.K., kand. biolog. nauk

Carbon monoxide in typical tractor repair shops. Gig. i san. 24
no.5:80-82 My '59. (MIRA 12:7)

1. Iz kafedry obshchey gigivny Vinnitskogo meditsinskogo instituta.
(CARBON MONOXIDE,
in air in tractor shops (Rus))

VAL'CHUK, N.K., kand.biologicheskikh nauk

Hygienic aspects of noise in sugar factories. Gig.i san. 25 no.9:
103-106 S '60. (MIRA 13:9)

1. Iz kafedry obshchey gigiyeny Vinnitskogo meditsinskogo instituta.
(NOISE) (SUGAR INDUSTRY--HYGIENIC ASPECTS)

VAL'CHUK, N.V.

Strazhesko's liver function test. Vrach. delo no.4:54-61 Ap '61.
(MIRA 14:6)

1. Terapevticheskaya klinika (zav. - prof. G.I.Burchinskiy) stomatologicheskogo fakul'teta Kiievskogo meditsinskogo instituta.
(LIVER)

VAL'CHUK, T.A.; MYSHENKOV, D.P.

The TZR-30 etching and protecting coating. Avt.prom. no.7:29-30
J1 '60. (MIRA 13:?)

1. Yaroslavskiy motornyy zavod.
(Corrosion and anticorrosives)

VAL'CHUK, V.N., assistant (Kiyev); FRANKOVSKAYA, S.I., dots. (Kiyev)

Some data on the condition of the blood vessels and capillaries
in patients with paradentosis. Probl.stom. 4:115-118 '58.
(MIRA 13:6)

(GUMS--DISEASES) (BLOOD VESSELS)

VAL'CHUK, V.N.

Some changes in blood protein and nitrogen in Botkin's disease.
Vrach. delo no.1:41-43 '59. (MIRA 12:4)

1. Kafedra terapii (zav. - dots. G.I. Burchinskiy) stomatologicheskogo fakul'teta Kiyevskogo meditsinskogo instituta.
(BLOOD PROTEINS)
(HEPATITIS, INFECTIOUS)

VAL'CHUK, V.N.

Variation of the nitrogen content of the diurnal uresis in patients
with Botkin's disease. Vrach. delo no.11:45-51 N '61.

(MIRA 14:11)

1. Terapevticheskaya klinika (zav. kafedroy - prof. G.I.Burchinskiy)
stomatologicheskogo fakul'teta Kiyevskogo meditsinskogo instituta.
(HEPATITIS, INFECTIOUS)

Country : Yugoslavia
CATEGORY : 8
ABS. JOUR. : RZBiol., No. 19, 1958, No. 8643
AUTHOR : Valcic, V.
INST. :
TITLE : Utilization of Atomic Energy in Forestry

ORIG. PUB. : Shumarsrvo, 1956, 9, No 6-7, 353-366

ABSTRACT : Presentation of literature data concerning the use of radioactive isotopes in biology, forestry, agriculture, and other applied sciences, in different countries, during the last 5-6 years. Bibliography 18 references.

CARD: 1/1

SAFAR, Lubomir, inz.; VALCIK, Oto, inz.

Current-carrying capacity of semiconductor valves. El. čist. osvaz
54 no.1:1-4 Ja '65.

1. Ceskomoravska-Kolben-Danek National Enterprises, Prague.
Submitted March 27, 1963.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5

VALCIKOVA, Z.

"Contribution to the Polarographic determination of manganese and iron."
Ceskoslovenska, Morfologie, Praha, Vol. 48, No. 5, May 1954, p. 777.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.

APPROVED FOR RELEASE: 08/31/2001

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"APPROVED FOR RELEASE: 08/31/2001

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✓ 1958 Contribution to the polarographic determination of manganese and iron

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CIA-RDP86-00513R001858420008-5

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5"

Valcovici, V.

✓ Valcovici, V. Le flambage d'une colonne pesante immergée dans un fluide et appuyée de tout son poids au fond.
⇒ Com. Acad. R. P. Române 1, 559-561 (1951). (Romanian, Russian and French summaries)

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VALCOVICI, V.

Valcovici, V. La solution graphique du problème du flambage des barres élastiques minces, pesantes, immergées dans un fluide. Com. Acad. R. P. Române 1, 727-730 (1951). (Romanian. Russian and French summaries)

I - F/W

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VÄLCOVICI

5880

Valcovici, V. La formule de flambage des colonnes per-
santes, immergées dans un fluide et soumises à une forte
compression. Com. Acad. R. P. Române 1, 905-907
(1951). (Romanian. Russian and French summaries)

1 - F/R

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"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5

V A I C O V I C I V.

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5"

VALCOVICI, V.

Mathematical Review
June 1954
Mechanics

(3)
✓ Valcovici, V. Détermination de la longueur critique dans
le flambage des colonnes pesantes immergées dans un
fluide. Acad. Repub. Pop. Române. Bul. Sti. Sect. Sti.
Mat. Fiz. 3, 341-375 (1951). (Romanian. Russian and
French summaries)

VALCOVICI, V. Les diagrammes de flambage dans le cas
des barres élastiques, lourdes, immergées dans un
fluide. La détermination de la compression de sûreté.
Com. Acad. R. P. Române 2, 185-188 (1952). (Ro-
manian. Russian and French summaries)

I - F/N

Rey

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5"

VALCOVICI, Victor

Vălcovici, Victor. Sur une théorie des alluvions. Acad. Repub. Pop. Române. Bul. Sti. Secți. Sti. Mat. Fiz. 4, 653-660 (1952). (Romanian. Russian and French summaries)

Afin d'expliquer la suspension des particules solides dans un courant fluide laminaire, l'auteur détermine les forces hydrodynamiques qui agissent sur la surface d'un cylindre immobile situé dans un courant de vitesse horizontale linéairement croissante avec la hauteur. De cette manière, il trouve que le fluide exerce une force d'ascension Y dont l'expression

$$Y = 2ap \left(a \int_C y^2 ds - \int_C y q ds \right)$$

est mise sous la forme d'une formule Blasius-Tchaplyguine.
From the author's summary.

Mathematical Review
June 1954
Mechanics

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5"

"APPROVED FOR RELEASE: 08/31/2001

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CIA-RDP86-00513R001858420008-5

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5"

VALCOVICI, V.

"Sur le theoreme des valeurs extremes ("VE)." Revue de Mathematiques Pures et Appliquees, Vol i, No. i, 1956.

VALCOVICI, V.

The bases of mechanics. p. 373.
(STUDII SI CERCETARI MATEMATICE. Rumamia. Vol. 7, no. 3/4. July/Dec. 1956)

SO: Monthly List of East European Accessions (KEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

VALCCVICI, V.

On the fundamental principles of the theory of relativity. In French. p. 323.

REVUE DE MATHEMATIQUES PURES ET APPLIQUEES. JOURNAL OF PURE AND APPLIED
MATHEMATICS. (Academia Republicii Populare Romine) Bucuresti. Rumania.
Vol. 2, 1957.

Monthly List of East European Accessions (EEAI) LC. Vol. 9, no. 1, January 1960.
Uncl.

VALCOVICI, V.

Minimal properties of the movement of systems. In French. p. 191.

REVUE DE MATHÉMATIQUES PURÉS ET APPLIQUÉES. JOURNAL OF PURE AND APPLIED
MATHEMATICS. (Academia Republicii Populare Romine) Bucuresti. Rumania.
Vol. 3, no. 2, 1958.

Monthly List of East European Accessions (EAL) LC Vol. 9, no. 1, January 1960.
UNCL

Valcovici, V.

Holonomic and nonholonomic analogies. p. 811.

Academia Republicii Populare Romine. STUDII SI CERCETARI DE MECANICA APLICATA.
Bucuresti, Rumania. Vol. 9, no. 4, 1958.

Monthly List of East European Accessions (EEAL) LC Vol. 9, No. 2, January 1960.

Uncl.

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R/008/60/000/006/002/008

A231/A126

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AUTHOR: Vâlcovici, Victor

TITLE: The Bernoulli surfaces

PERIODICAL: Studii și cercetări de mecanică aplicată, no. 6, 1960, 1,507 - 1,533

TEXT: The use of Bernoulli surfaces in treating the motion of fluids represents a considerable simplification, since the three-dimensional motion is reduced to a two-dimensional one, i.e., to the flow on the rigid Bernoulli surfaces. Three important phases of the evolution of the mathematical problem of the motion of ideal fluids can be distinguished: Phase I, regarding the plane, irrotational motion of the non-compressible fluids, also called the Cauchy phase. The motion is supposed to identically repeat in all parallel planes $z = \text{const}$. Phase II, regarding the plane, irrotational motion of the compressible fluids, also called Chaplygin phase. Phase III, also called the phase of the Bernoulli surfaces (SB), takes into consideration the three-dimensional motion of the barotrope fluids. This phase treats the three-dimensional motion of the fluid, but also supposes the motion to be rotational. It encloses the mathematical treatment of the general motion (permanent) of a barotrope fluid. The mathematical treatment of this

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general problem will present some properties of some rigid surfaces - Bernoulli surfaces - on which the motion will take place. The three-dimensional motion will thus be transformed into a two-dimensional motion, whereas the $z = \text{const}$ planes will be replaced by a family of Bernoulli surfaces. Due to the Soviet mathematicians C.C. Viushgens and O.V. Golubeva, several papers of more geometrical nature appeared in Soviet periodicals: Ref. 13: J. Grialou, C.R. Paris 198, 1,972 - 1,973 (1934); Ref. 15: A. Winter, Quart. Appl. Math., IX, 102 - 105 (1951); Ref. 16: K.K. Viushgens, Dokl. AN SSSR, 78, 837 - 840 (1951); Ref. 17: K.K. Viushgens, Dokl. AN SSSR, 84, 861 - 863 (1952); Ref. 18: Gh. Gheorghiev, St. cerc. Iași, II, 1 - 18 (1951) [Abstracter's note: Only two of the five references mentioned by the author are of Soviet origin.] Professor Gh. Gheorghiev in Iași recently published some observations of geometrical nature [Ref. 18, and Ref. 19: Rev. Univ. Iași, II, 43 - 64 (1955)]. The way how the Bernoulli surface was deduced shows that there exists a family of such surfaces, depending on a single parameter, expressed by: $B = \text{const.}$ (11). They are rigid surfaces in the fluid and the motion of the fluid will be a flow along these rigid surfaces. It thus can be said that the study of the three-dimensional motion of the fluid is reduced to the two-dimensional motion of a mobile fluid on the Bernoulli surface (SB). Based on an advantageous system of coordinates also used in Ref. 22 [V.

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The Bernoulli surfaces

Vălcovici, Rend. Lincei, XII, 288 - 296 (1956)] the author continues the study of the motion. Conclusions: Taking the Bernoulli surfaces (SB) into consideration, the author reduced the permanent motion of barotrope fluids from a three-dimensional value to a two-dimensional one. This reduction results in a simplification of the treatment of the problem. The existence of two functions, φ and ψ was proved, where φ has the essential property of the potential function from the plane motion, i.e., the property of producing the velocity component by its partial derivatives in ratio with the curvilinear coordinates of the points on the SB. The function ψ is a current function, i.e., the family of the current lines is given by the equation $\psi = \text{const.}$, all current lines being located on the Bernoulli surface (SB). The curve lines are also located on the SB surfaces, where-

as their equation is given by: $\frac{\partial \varphi}{\partial n} = \text{const.}$, dn being the displacement on the normal line to SB. The differential equations which have to be satisfied by the function φ and ψ , are some generalizations of the Laplace equation of the second order. Between these two functions there are relations which generalize the Cauchy-Riemann relations regarding the real part and the imaginary part of a function of a complex variable. The use of the Bernoulli surfaces thus opens new prospects in different directions. Especially, the determination of a fluid mo-

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The Bernoulli surfaces

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tion, admitting a given uniparametric family, can thus be accomplished. There are: 1 figure and 27 references: 13 Soviet-bloc and 14 non-Soviet-bloc. The reference to the English-language publication reads as follows: Ref. 15, A. Wintner, Quart. Appl. Math. IX, 102 - 105 (1951).

ASSOCIATION: Universitatea "C.I. Parhon" (University "C.I. Parhon")

SUBMITTED: September 3, 1960

Card 4/4

VALCOVICI, Victor

On the fundamentals of mechanics. Rev math pures 6 no.1:5-24 '61.
(ERAI 10:9)

(Mechanics)

VALCOVICI, Victor (Bucuresti)

On an axiom of the static rigid solid. Studia Univ B-B S.
Math-Phys 7 no.1:117-120 '62.

VALCOVICI, Victor

The variational principles of mechanics. Rev math pures 8 no.4:531-
539 '63.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5

UNIVERSITY OF MICHIGAN

Faculty of Mathematics and Physics of the University of Michigan,
Ann Arbor, U.S.A.

Faculty of Mathematics and Physics of the University of Michigan,
Ann Arbor, U.S.A.

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"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5

VALCOVICI, V.

On the rotation motion of a viscous fluid. Studii cerc mat 16 no.10:
1189-1205 '64.

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5"

VALCOVICI, Victor

On the rotation motion of a viscose fluid. Rev math Roum 10
no.1:3-17 '65.

1. Faculty of Mathematics and Mechanics, University of Bucharest.
Submitted May, 1964.

VALCOVICI, Victor, prof. univ., om de stiinta emerit

A new theory of the universe. St st Teh Buc 17 no.1:11-
13 Ja '65.

VALD, B.; ZOLTAN,L.; POLANSKI, T.; TOT, S.; BERICZEI, M.

Treating generalized forms of malignant tumors by injecting Y⁹⁰ into
the hypophysis. Vop. onk. 6 no. 10:9-18 0 '60. (MIRA 14:1)
(YTTRIUM-ISOTOPES) (CANCER) (PITUITARY BODY)

VAL'D, I.

Val'd, I.

"Aspects of aphasia in polyglots." Acad Med Sci USSR. Moscow, 1956.
(Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya letopis', No. 25, 1956

CERNIK, Oldrich; GASEK, inz.; STRIBRNY, A.; NOVOTNY, V.; ROUCKA, inz.; JERIE, dr.; BENDA, O.; HINKE, dr.; HOMOLA, F., inz.; SPETL, doc., inz.; dr.; ZAK, inz.; ZEMAN, inz.; PAVLICEK, Z., inz.; VESELY, B., inz.; KUCERA, Fl., inz.; VALD, V.

Main trends and goals in increasing the utilization of fuels and energy in the national economy in long range planning up to 1970.
Energetika Cz 12 no.12:Suppl.:Energetika 11 no.12:1-14 '62.

1. Ministr paliv a energetiky (for Cernik).

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5

VALDA, Vladimir, inz.

Measurement of the inverse part of volt-ampere response of semi-conductor components. Sde tech 10 no.8:289-291 Ag '62.

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858420008-5"

VALDA, Vladimir, inz.

Universal device for testing low-frequency transistors.
Sdel tech 11 no.2:63-65 F '63.

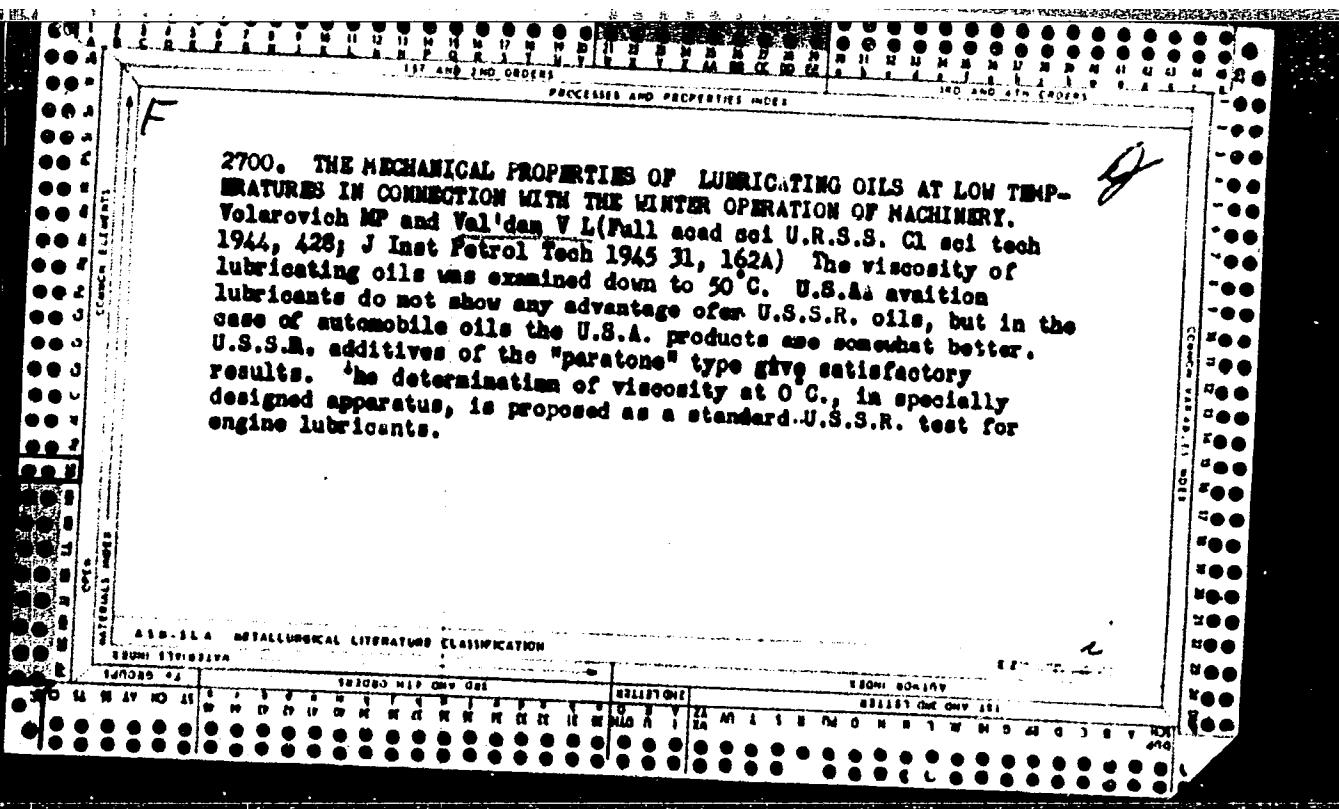
2047. EFFECT ON RATE OF COOLING ON PROPERTIES OF LUBRICATING OILS AT LOW TEMPERATURES. Val'deman VL (Kolloid Zhar. (Colloid J), 1949, vol. 11, 137-140; abstr. in chem abstr., 1949, vol. 43, 7675). The viscosity η and the yield point Θ of rapidly cooled oils often are greater than η and Θ after slow cooling, especially if the oil contains much paraffin wax (1). The rate of cooling between 15 min and 10 hours. The ratio $\eta_{\text{slow}} / \eta_{\text{fast}}$ (η after rapid, η after slow cooling) was usually less when the velocity gradient S in the rotational viscometer used was greater; e.g. it was 2.93 and 1.18 at $S = 0.03$ and 1.4 sec^{-1} , respectively, for an oil containing 2% of 1. In an oil containing 6% of 1, $\eta_{\text{slow}} / \eta_{\text{fast}}$ was 6.75 for $S = 0.14$. and of this oil were e.g. 4500 and 8000 dynes/cm², respectively. The ratios $\eta_{\text{slow}} / \eta_{\text{fast}}$

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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and G_1/G_2 were greater the lower the final temperature (-19° to -56°). Presumably these effects are caused by the dependence of the particle size of I crystals on the rate of cooling.

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YAKUNINA, A.V.; VALDAVINA, K.D., agronom

Codling moth in Tatarstan. Zashch. rast. ot vred. i bol. 8
no.2:50 F '63. (MIRA 16:7)

1⁴ Zaveduyushchaya Chistopol'skim punktom signalizatsii i
prognozov, Chistopol' (for Yakunina). 2. Chistopol'skiy punkt
signalizatsii i prognozov, Chistopol' (for Valdavina).
(Tatar A.S.S.R.—Codling moth)

P/013/60/000/002/002/003
B124/B220

AUTHORS: Valdauf, B., Engineer, Vicha, V., Engineer

TITLE: Prospects of the production of liquid fuels and of the development of the petrochemical industry

PERIODICAL: Chemik, no. 2, 1960, 59-61

TEXT: Up to now, liquid fuels have been produced in Czechoslovakia by processing petroleum as well as brown coal tar in a ratio of about 1:1; the development, however, renders the present situation unbearable. The rapidly increasing demand for liquid fuels had to be met by importation of petroleum, since the own supplies were insufficient. From an economic point of view, a combination of distillation with the cracking or high-pressure hydrogenation of the distillation residue proved to be advantageous, since by simultaneous application of all three processes a yield in liquid fuels of more than 92% can be obtained; the investment cost is, however, high. In order to speed up the construction of new facilities for the processing of petroleum, the most simple technological method had

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Prospects of the production...

to be applied, i.e., direct distillation, refining by hydrogenation, and reforming. Under the given conditions, the construction of a refinery having a yearly capacity of 4,000,000 tons of petroleum is economically justified. Of great importance is a uniform distribution of refineries all over the country. It is planned to supply the refineries with petroleum by means of a central pipeline system. By 1965, the demand for aromatic hydrocarbons will be covered by crude benzene from coke, high-temperature tars and brown coal tar, i.e., the demand for phenol partly by brown coal tar and partly by high-temperature tar, and that for acetylene partly by coke. The olefin gases and other hydrocarbons, and the amounts of acetylene lacking at present will be obtained from petrochemical raw materials, i.e., petroleum and natural gas. As basic technological processes were chosen: 1) the pyrolysis of saturated hydrocarbons and benzine and their separation by distillation, and 2) the incomplete combustion of natural gas, whereby acetylene as well as synthetic gas are obtained. The increase in the production of liquid fuels will no longer attain the figures of the period 1960-1965; after 1965 attention will be focused on a more economic distribution and on

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